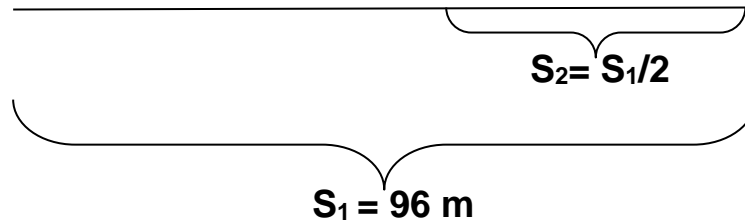


Question #60702, Physics / Other | for completion

A dog runs 96 m away from its master in a straight line in 9.0 s and then runs halfway (1/2) back in one-third (1/3) the time. The average velocity of the dog for the entire run is?

Solution



The average velocity is defined as all the way divide all the time, i.e.:

$$\langle v \rangle = \frac{S_1 + S_2}{t_1 + t_2} = \frac{96 \text{ m} + 48 \text{ m}}{9 \text{ s} + 3 \text{ s}} = \frac{144 \text{ m}}{12 \text{ s}} = 12 \text{ m/s}$$

Answer the questions:

The average velocity of the dog for the entire run is $\langle v \rangle = 12 \text{ m/s}$.